

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 10951 2/21/2001]

[Docket No. 99-NM-206-AD; Amendment 39-12114; AD 2001-03-10]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, -200, -300, -400, and 747SR Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD); applicable to all Boeing Model 747-100, -200, -300, -400, and 747SR series airplanes; that requires a one-time inspection to determine whether H-11 steel bolts are installed as attach and support bolts at the trailing edge flap transmissions, and replacement of any H-11 steel bolt with an Inconel bolt. The actions specified by this AD are intended to prevent loss of a flap transmission, which could reduce lateral controllability of the airplane.

DATES: Effective March 28, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 28, 2001.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Barbara Mudrovich, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2983; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to all Boeing Model 747-100, -200, -300, -400, and 747SR series airplanes was published as a supplemental notice of proposed rulemaking (NPRM) in the **Federal Register** on May 31, 2000 (65 FR 34604). That action proposed to require a one-time inspection to determine whether H-11 steel bolts are installed as attach and support bolts at the trailing edge flap transmissions, and replacement of any H-11 steel bolt with an Inconel bolt. That action also proposed to expand the applicability of the original NPRM to include additional airplanes.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Request to Extend the Compliance Time

Several commenters request that the compliance time for the proposed rule be extended. The commenters' suggestions for an appropriate compliance time range from 16 to 24 months. Most commenters' requests are based on the need for additional time so that subject H-11 steel bolts can be replaced during a scheduled maintenance visit. However, one commenter, who suggests that a compliance time of 18 months would allow accomplishment of the AD during a heavy maintenance

visit, also states that the replacement Inconel bolts listed in the service bulletin are not available in sufficient quantity to meet the needs of all affected operators. The commenter points out that, if adequate quantities of replacement bolts are not available, airplanes will be grounded. Similarly, another commenter requests that the FAA coordinate compliance times for this AD with the airplane manufacturer to ensure that an adequate supply of parts is available for replacement of the subject bolts on all airplanes in the worldwide fleet.

The FAA concurs that the compliance time for the actions required by this AD may be extended. In developing an appropriate compliance time for this AD, the FAA considered not only the degree of urgency associated with addressing the subject unsafe condition, but the amount of time necessary to accomplish the necessary actions, the practical aspect of accomplishing the requirement within an interval of time that parallels normal scheduled maintenance for affected operators, and the availability of replacement parts. In consideration of these factors, the FAA has determined that 18 months represents an appropriate compliance time allowable wherein an acceptable level of safety can be maintained. Paragraph (a) of this AD has been revised accordingly.

Though the FAA is extending the compliance time for the actions required by this AD, it should be noted that the FAA does not concur with the comment that the replacement Inconel bolts listed in the service bulletin are not available in sufficient quantity to meet the needs of all affected operators. The FAA has confirmed with the airplane manufacturer that an adequate supply of bolts is available.

Request to Provide Relief for Operators of Certain Airplanes

One commenter requests various changes to the proposed rule to differentiate between airplanes delivered with H-11 steel bolts and airplanes not delivered with H-11 steel bolts, but that may have had such bolts installed as spares. The commenter states that, to avoid confusion, the proposed AD must be revised to make clear that H-11 steel bolts were not used as attach and support bolts at the trailing edge flap transmissions in airplanes having line number (L/N) 872 and subsequent. The commenter asserts that, while this was apparent in the original NPRM, it was not clear in the supplemental NPRM. The purpose of the commenter's proposed changes is to provide relief to operators of airplanes not delivered with H-11 steel bolts. The commenter specifically requests that the FAA divide the applicability of the AD into three groups, and that operators of certain airplanes be given the option of examining the maintenance records to determine if any major flap transmission or flap track repair or replacement has been done on the airplane. If no such repair or replacement has been done, no further action would be necessary for that airplane.

The FAA concurs with the intent of the commenter's request, though not with the grouping of airplanes suggested by the commenter. The FAA finds that operators of airplanes that were not delivered with H-11 steel bolts may be allowed to comply with this AD by inspecting the maintenance records for the airplane to determine if H-11 steel bolts may have been installed during a repair or replacement of a flap transmission or flap track. If the inspection of maintenance records conclusively shows that no major repair or replacement of a flap transmission or flap track has been done, then no further action is necessary for that airplane. Therefore, the FAA has revised this final rule to include a new paragraph (b), which offers operators of airplanes having L/N 872 and subsequent the option of an inspection of maintenance records to be performed instead of the inspection in paragraph (a) of this AD. (Subsequent paragraphs have been reordered accordingly.)

Request to Reduce Applicability

One commenter disagrees with the expansion of the applicability that was proposed in the supplemental NPRM. The commenter states that it is an operator's responsibility to track components removed from one airplane and installed on another. The commenter states that it is unfair to penalize operators who are able to track components from airplane to airplane.

The FAA concurs with the commenter's intent. As explained above, the FAA has added paragraph (b) to this final rule to give operators of airplanes that were not delivered with H-11 steel bolts the option to inspect the maintenance records for the airplane to determine if H-11 steel bolts may have been installed during a repair or replacement. If the maintenance records conclusively show that no major repair or replacement of a flap transmission or flap track has been done, then no further action is necessary for that airplane. However, if it cannot be determined from the inspection

of the maintenance records if such repair or replacement has been done, this AD requires an inspection for H-11 steel bolts, and follow-on corrective actions, if necessary. No further change to the final rule is necessary in this regard.

Request to Prohibit Future Installation of H-11 Steel Bolts

One commenter requests that the FAA revise the proposed rule to include a statement that no airplane may be modified to introduce H-11 steel bolts into the flap transmissions. The commenter states that such a statement is necessary to ensure that H-11 steel bolts are not installed in the flap transmissions of the subject airplanes (e.g., from spares) after the effective date of this AD. In a related issue addressed separately above, the same commenter proposes dividing the applicability of this AD into three groups, with one group of airplanes—those delivered after the effective date of this AD (Group 3)—requiring no action per this AD.

The FAA does not concur with the commenter's request. Revising the proposed rule to prohibit installation of H-11 steel bolts into the flap transmissions after the effective date of this AD would involve adding a new requirement to this AD, which would necessitate issuing another supplemental NPRM and reopening the public comment period. Considering the criticality of the unsafe condition, the FAA finds that it would be inappropriate to delay issuance of the final rule in this way. This AD will prohibit installation of H-11 steel bolts after 18 months following the effective date of this AD, and the FAA finds that this 18-month interval is adequate to both ensure that all affected operators will be able to comply with this AD in a timely manner and ensure the safety of the affected airplane fleet. No change to the final rule is necessary in this regard.

Request to Allow Deferred Replacement of Bolts

One commenter states that it "seems strange" that the FAA is allowing a compliance time of one year for the inspection but requiring the replacement before further flight of any H-11 steel bolt with an Inconel bolt. Another commenter points out that dispatch relief provided by Boeing Alert Service Bulletin 747-27A2376, dated July 1, 1999, via a torque check of H-11 steel bolts was omitted from the proposed rule.

The commenters make no specific request for a change to the proposed rule. However, the FAA infers that the commenters are requesting that the FAA allow deferred replacement of H-11 steel bolts that are not broken, as provided in the service bulletin. The FAA does not concur with this request. As explained in the original NPRM, though the service bulletin describes an option to defer replacement of an H-11 steel bolt by performing a torque inspection to determine whether the H-11 steel bolt is broken, the FAA has determined that such a deferral would not result in the unsafe condition being addressed in a timely manner. In addition, as explained previously, the FAA is extending the compliance time for the inspection required by this AD from 12 to 18 months. This extension of the compliance time will allow operators to plan appropriately for doing this AD on their airplanes, so that the required actions may be done during a scheduled maintenance visit. No further change to this AD is necessary in this regard.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 1,240 airplanes of the affected design in the worldwide fleet. The FAA estimates that 281 airplanes of U.S. registry will be affected by this AD.

The required inspection will take approximately 2 work hours per airplane at an average labor rate of \$60 per work hour. Based on these figures, the FAA estimates the cost impact of this inspection on U.S. operators to be \$33,720, or \$120 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required

by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Should an operator be required to accomplish the bolt replacement, it will take approximately 4 work hours per airplane (0.5 hour per transmission), at an average labor rate of \$60 per work hour. Required parts will cost approximately \$5,049 per airplane. Based on these figures, the FAA estimates the cost impact of the replacement to be \$5,289 per airplane.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption “ADDRESSES.”

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-03-10 BOEING: Amendment 39-12114. Docket 99-NM-206-AD.

Applicability: All Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, and 747SR series airplanes; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of a flap transmission, which could reduce lateral controllability of the airplane, accomplish the following:

Replacement

(a) Except as provided by paragraph (b) of this AD, within 18 months after the effective date of this AD, perform a one-time general visual inspection to determine whether H-11 steel bolts are installed as attach and support bolts at the trailing edge flap transmissions, in accordance with Boeing Alert Service Bulletin 747-27A2376, dated July 1, 1999.

(1) If no H-11 steel bolt is found, no further action is required by this AD.

(2) If any H-11 steel bolt is found, before further flight, replace with an Inconel bolt, in accordance with the alert service bulletin.

Note 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Alternative Inspection for Certain Airplanes

(b) For airplanes having line number (L/N) 872 and subsequent: Instead of doing paragraph (a) of this AD, it is acceptable to inspect airplane maintenance records to determine if a flap transmission or flap track repair or replacement has been done. This inspection of the maintenance records, if

done, is required at the same 18-month compliance time as the inspection required by paragraph (a) of this AD.

(1) If no flap transmission or flap track repair or replacement has been done: No further action is required by this AD.

(2) If any flap transmission or flap track repair or replacement has been done, or if it cannot be determined from the inspection of the maintenance records if such repair or replacement has been done: Within 18 months after the effective date of this AD, do paragraph (a) of this AD.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) Except as provided by paragraph (b) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-27A2376, dated July 1, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(f) This amendment becomes effective on March 28, 2001.

FOR FURTHER INFORMATION CONTACT: Barbara Mudrovich, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2983; fax (425) 227-1181.

Issued in Renton, Washington, on February 8, 2001

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.